

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>D81209PC</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/EP2004/008184</b>	International filing date (day/month/year) <b>22.07.2004</b>	Priority date (day/month/year) <b>25.07.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>A61L15/B0, A61L15/08, B01J20/26</b>		
Applicant <b>STOCKHAUSEN GMBH</b>		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.
3.	This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4.	This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/008184

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
  - ☐ publication of the international application (Rule 12.4)
  - ☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☐ the international application as originally filed/furnished
- ☒ the description:

pages 1-60 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- ☒ the claims:
- nos. 1-25 as originally filed/furnished

nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19

nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- ☒ the drawings:
- sheets 1 as originally filed/furnished

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	8-10, 15-17, 21-25	YES
	Claims	1-7, 11-14, 18-20	NO
Inventive step (IS)	Claims		YES
	Claims	1-25	NO
Industrial applicability (IA)	Claims	1-25	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
1). Reference is made to the following documents:			
D1: DE-A-10026861			
D2: WO-A-91/18042			
D3: WO-A-00/10619			
D4: WO-A-01/74913			
D5: US-A-5002986			
D6: EP-A-612533			
D6 was not cited in the international search report. A copy of the document is appended.			
2). Claim 1 of the present application relates to a composition based on 60 to 99.998 wt.% of a powdery water-absorbing polymer with a particle size of 200µm and more, 001 to 10 wt.% of a thermoplastic adhesive with a melt temperature of at least 50°C, and 0.01 to 20 wt.% of a fine particle with a particle size of less than 200 µm. The powdery water-absorbing polymers are characterised by a parameter, i.e. the flow coefficient (FFC) or by a dust ratio.			
The fine particles can be present in the form of fibres, such as, for example, cellulose fine particles (see			

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description, page 11, lines 19-26) and are connected to the surface of the water-absorbing polymer particles by means of the thermoplastic adhesive.

3). PCT Article 33(2):

D6 discloses a water-absorbing material comprising (A) water-absorbing particles, (B) resin powder and (C) fibre material such as, e.g., cellulose.

The polymer particles (A) adhere to the fibre material (C) via the resin (B) as a result of the heat treatment. The quantity of the resin powder (B) is 0.5 to 30 parts by weight per 100 parts by weight of the polymer particles (B) and the weight ratio of the particles (A) to the fibre material (C) is 20:80 to 95:5. The melting point of the resin powder is 60 to 180°C. The size distribution of the powdery water-absorbing polymer is such that 90 weight percent or more is 0.1 to 0.9 mm in size.

The fibres (C) are 0.1 to 100 denier in size. The adhesives (B) are introduced as particles and are preferably 10 to 200 µm in size.

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claims 1-7, 11-14 and 18-20 is not novel (PCT Article 33(2)).

4). PCT Article 33(3):

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claims 1-25 does not involve an inventive step (PCT Article 33(3)).

D1 is considered the prior art closest to the subject

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matter of claim 8. D1 discloses a superabsorber composite having at least superabsorber particles and hot-melt adhesives. The superabsorber particles are between 30 and 500  $\mu\text{m}$  in size. A mixture of two or more superabsorbers can be used, the particle size of the superabsorbers being different. Suitable hot-melt adhesives have softening points in a temperature range of 90 to 120°C and the viscosity is above the softening point of < 200 mPas. The superabsorber composites are free-flowing and flow due to their intrinsic weight through an opening having a diameter of 10 cm.

The subject matter of claim 8 differs therefore from the known composition in that inorganic materials in particle form are contained as fine particles in the water-absorbing polymers.

The problem addressed by the present invention can therefore be considered that of producing modified superabsorber particles having good suction properties and a mechanical stability and which do not form dust. The solution to this problem proposed in claim 8 of the present application cannot be deemed inventive for the following reasons (PCT Article 33(3)):

D3 discloses a powdery composition comprising an inorganic powder in a quantity of 0.1 to 10 wt.% and a superabsorbing polymer. The average size of the inorganic powder particles is less than 5  $\mu\text{m}$  and the polymer particles are sized such that less than approximately 60 wt.% fall through a 50-mesh US standard sieve with a mesh size of 300  $\mu\text{m}$ .

The composition shows dust-reducing properties and a retention of more than 20g/g (see pages 31 and 32, table B).

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The subject matter of claim 8 consists in the selection of a specific fine particle from the materials described in D3.

D6 describes the use of organic particles to produce modified superabsorber particles, the organic particles being sufficiently adhesive to the surface of the superabsorber particles.

D2-D5 describe water-absorbing polymers in powder form, wherein the surface cross-linking agent contains at least one organic compound or a polyvalent metal cation.

The dependent claims do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT inventive step requirements - see D2-D5 and the corresponding passages indicated in the search report.

The subject matter of claims 1-25 therefore does not involve an inventive step with respect to D1 in conjunction with the teaching of one of documents D2-D5, and in particular with respect to D1 with D3 and/or D6.